

REMARKS

Claims 1, 7-9, and 12 have been amended. Claims 13-24 have been withdrawn. Claims 1-12 remain pending in this application, with claim 1 being the only independent claim. The Information Disclosure Statement filed on July 8, 2003 has been rejected for failing to comply 37 C.F.R. §1.97 and §1.98 because several foreign patent documents were submitted without English translations. The drawings have been objected to for allegedly not showing every feature specified in the claims. Claims 1-12 have been rejected under 35 U.S.C. §103(a) as unpatentable over European Patent EP 1 249 869 to Mattmann et al. ("Mattmann") in view U.S. Patent No. 4,521,476 to Asai et al. ("Asai"), and further in view of U.S. Patent No. 3,714,709 to Liederbach ("Liederbach")

Information Disclosure Statement

The Office Action states that the Information Disclosure Statement filed on July 8, 2003 fails to comply 37 C.F.R. §1.97 and §1.98 because several foreign patent documents were submitted without English translations.

Applicants herewith resubmit the Information Disclosure Statement, which now complies with 37 C.F.R. §1.97 and §1.98.

Objections to the drawings

According to the Office Action, the drawings do not show every feature specified in the claims. Specifically, the Examiner asserts that the plurality of power and/or electronic components recited in claims 1, 7-10, and 12 are allegedly not shown in the drawings.

Fig. 1 has been amended to show a further insulating layer (3a), one of said electronic power components (8b), a further conductor track (4a), and a further electronic power component (8b). Support for the amendments can be found in claim 12 and in paragraph [0019] of Applicants' published specification.

According to Applicants' published specification, the power semiconductor element 8 and electronic power component 8a, 8b that are shown in Fig. 1, and are described in paragraphs [0034] and [0019] and the newly added paragraphs, are the electronic power components recited in independent claim 1. The power semiconductor element 8 and one of the electronic power components 8a, 8b are the power semiconductor element and the driver component, respectively, recited in claim 7. The electronic component 10 is the at least one of electrical and electronic components arranged on the conductor track system recited in claim 8.

The semiconductor element 8 and the power components 8a, 8b are the said power components, and the electronic component 10 is the at least one of an electrical and an electronic component recited in claim 9. The semiconductor element 8 and the power components 8a, 8b are the said power components recited in claim 10.

The insulating layer 3a, the electronic power component 8a, the conductor track system 4a, and the electronic power component 8b are the further insulating layer, the one of said electronic power components, the further conductor track system, and the further electronic power component, respectively, recited in claim 12.

Applicants submit that this objection is now overcome.

Amendments to the specification

Applicants' specification has been amended to add a description corresponding to the

amendments to Fig. 1. Support for the amendment can be found in claim 12 and in paragraph [0019] of Applicants' published specification.

Rejection of claims 1-12 under 35 U.S.C. §103(a)

The Office Action states that the combination of Mattmann, Asai, and Liederbach teaches all of Applicants' recited elements.

Independent claim 1 has been amended to point out more clearly the subject matter that Applicants regard as the invention. Specifically, claim 1 has been amended to recite an electronics unit that includes a low multi-point metallic mount (1), an insulating layer that includes a sintered electrically insulating polymer layer (3) arranged on the mount (1), and a conductor track system (4, 5, 6) that includes a sintered glass frit with a noble metal filling arranged on the insulating layer. The electronics unit further includes a resistance layer (7) printed onto the polymer layer (3) within one area of the conductor track (6), and electronic power components (8, 10) arranged on the conductor track system (4, 5, 6). Support for the claim amendment can be found in original dependent claims 2 and 3, and paragraph [0033] of the published specification.

The combination of Mattmann, Asai, and Liederbach fails to teach or suggest an electronics unit that includes: "a resistance layer printed onto the polymer layer within one area of the conductor track", as recited in Applicants' amended independent claim 1.

Mattmann discloses a cooling device that includes an aluminum carrier (1) to which an insulating layer (2) made of ceramic material is applied. Mattmann also discloses that a power semiconductor device (3) is arranged on the insulating layer (2), and that the power semiconductor device (3) may be arranged on a conduction layer (5) on the insulating layer (2). Further, Mattmann discloses that film resistors made of polymer paste maybe be arranged on the

insulating layer (2). Mattmann, however, fails to teach or suggest: “a resistance layer printed onto the polymer layer within one area of the conductor track system”, as recited in Applicants’ amended independent claim 1.

Asai discloses a hybrid integrated circuit. The hybrid integrated circuit of Asai is produced by laminating an aluminum-copper clad foil on an insulating layer, and etching the aluminum-copper clad foil with etching agents to form an aluminum circuit and a copper circuit. Asai further discloses that a semiconductor element is then connected to the aluminum circuit through an aluminum wire or a gold wire, and a circuit element is connected to the copper circuit.

In contrast to the invention recited in Applicants’ amended independent claim 1, Asai fails to teach or suggest: “a resistance layer printed onto the polymer layer within one area of the conductor track system”.

Liederbach discloses a method of manufacturing thick-film hybrid integrated circuits. The method of Liederbach includes screen printing a pattern of conductors, resistors, capacitors, and inductors on a ceramic substrate, curing the components, covering the cured components and substrate with a thin layer of a resin composition while leaving openings in the layer for mounting discrete components and jumpers, mounting the discrete components, and encapsulating the resulting device in a resin composition.

Also in contrast to the invention recited in Applicants’ amended independent claim 1, Liederbach fails to teach or suggest: “a resistance layer printed onto the polymer layer within one area of the conductor track system”.

In view of the foregoing, Mattmann, Asai, and Liederbach, whether taken alone or in combination, fail to teach or suggest the subject matter recited in Applicant’s amended independent claim 1. Specifically, the references fail to teach or suggest, an electronics unit that

includes: "a resistance layer printed onto the polymer layer within one area of the conductor track system".

Claims 2-12, which depend directly or indirectly from amended independent claim 1, incorporate all of the limitations of independent claim 1 and are therefore deemed to be patentably distinct over Mattmann, Asai, and Liederbach for at least those reasons discussed above with respect to amended independent claim 1.

Conclusion


In view of the foregoing, reconsideration and withdrawal of all rejections, and allowance of all pending claims is respectfully solicited.

Should the Examiner have any comments, questions, suggestions, or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

COHEN PONTANI LIEBERMAN & PAVANE LLP

By 
Alfred W. Froeblich
Reg. No. 38,887
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

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